Measurement in Social Research

Validity and Reliability

Levels of Measurement

The Measurement Process

How do we know a measure is trustworthy?

Two Criteria:

<u>Reliability</u> = consistency, dependability, repeatability

<u>Validity</u> = accuracy in measurement, truthfulness in representing the construct you defined

The Measurement Process

Quantitative Validity

(1) <u>Face</u>: Do others accept your measure as valid?

(2) <u>Criterion</u>: Does your measure match another accepted measure of the same construct?

(3) <u>Predictive</u>: Does your indicator truly predict future events?

(4) <u>Content</u>: Does your measure capture the whole conceptual definition?

The Measurement Process

Quantitative Reliability

(1) <u>Stability</u>: Across Time

(2) <u>Representative</u>: Across Groups

(3) <u>Equivalence</u>: Across Indicators

The Measurement Process

Qualitative Validity

(1) <u>Authenticity</u>: Does the narrative accurately represent reality as experienced by research subjects?

(2) <u>Plausibility</u>: Is the description powerful and persuasive? Is it supported by diverse data? Does it represent "dense" connections?

The Measurement Process

Qualitative Reliability

(1) <u>Dependability/Consistency</u>: Is the form of observation consistent over time?

Levels of Measurement

Quantitative Variables

(1) Discrete Variables

Have a relatively fixed set of separate values/attributes that can be measured in categories

(2) Continuous Variables

Have an infinite number of values/attributes that can be measured on a continuum

Levels of Measurement

Quantitative Variables

(1) Nominal: Can be expressed only in categories

(2) Ordinal: Categories can be ranked

(3) Interval: Ranks are equidistant

(4) Ratio: Scale includes a true zero